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TEMPORAL TRENDS IN AND FACTORS ASSOCIATED WITH SINGLE VERSUS DUAL COIL IMPLANTABLE CARDIOVERTER-DEFIBRILLATOR LEADS: DATA FROM THE NCDR ICD REGISTRY

Poster Contributions
Poster Hall B1
Saturday, March 14, 2015, 10:00 a.m.-10:45 a.m.

Session Title: Contemporary Challenges in Cardiac Implantable Device Management
Abstract Category: 6. Arrhythmias and Clinical EP: Devices
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Background: There are no data that dual coil (DC) implantable cardioverter-defibrillator (ICD) leads are associated with lower mortality, and DC leads are more difficult to extract than single coil leads. The objective of this analysis is to evaluate temporal trends in and factors associated with DC lead use.

Methods: There were 275,437 patients at 1,513 hospitals that underwent defibrillator lead implantation in the National Cardiovascular Data Registry's (NCDR®) ICD Registry™ between April 2010 and December 2013. Using latent class growth curve analysis, hospitals were classified into groups based on frequency of DC lead use over time: low, decreasing, or high use.

Results: Nationally the use of DC ICD leads has decreased over time (Figure) from nearly 90% of all ICD leads in early 2010 to roughly 70% of leads in 2013. Hospitals in the low (221) or decreasing use (426) versus high use (863) cohorts were more frequently academic (39% or 45% vs 29%) and non-profit (77% or 75% vs 64%). Hospitals in the low or decreasing use compared to high use cohorts had more ICDs implanted by electrophysiologists (93% or 83% vs 50%) and performed more extractions (median of 5 or 11 vs 2). Patients had similar clinical characteristics across all three groups.

Conclusion: Use of DC ICD leads decreased over time, but continues to represent the majority of implants in the US. Hospital level factors are associated with use of DC leads, while patient characteristics are similar across institutions and are not associated with DC use.